

REMARKS AND ARGUMENTS

New claims 44-48 have been added to the application.

Claim Rejections - 35 USC § 102

Initially it is noted that the Examiner has reproduced 35 U.S.C. 102(a) in the Office action as "the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections[.]" (See Office action dated January 19, 2007: page 2). However, in the next sentence the Examiner states the claims are anticipated by Sugimoto et al. (WO 03/010832) (hereafter "Sugimoto WO") under 35 U.S.C. 102(e). The Examiner indicated to the Applicant's attorney in a telephone interview on May 18, 2007, that 35 U.S.C. 102(a) is in fact the intended grounds for rejection.

Invention Predating Reference

The Examiner has rejected claims 1-3, 8-10, 12-25 and 27-42 under 35 U.S.C. 102(a) as being anticipated by Sugimoto WO. Sugimoto WO has a publication date of February 6, 2003.

The Declaration of James Ibbetson submitted herewith establishes an actual physical reduction to practice of the invention prior to the Sugimoto WO publication date. An "Invention Disclosure" attached to the Declaration as Exhibit A supports conception of the subject matter of independent claims 1, 18 and 32 prior the Sugimoto WO publication date. Attached to the Declaration as Exhibit B is a "Final Report" establishing that, subsequent to conception, various tests were performed on emitter devices embodying the independent claims of the

application, evidencing the actual reduction to practice prior to the Sugimoto WO publication date.

Since the Sugimoto WO reference relied upon in this Office action has a publication date of February 6, 2003, this reference is accordingly not prior art under 102(a). Nor is Sugimoto WO prior art under 102(e) or 102(b) as has been shown in previous replies to Office actions in this case. For at least the reasons stated above, Applicant respectfully requests the withdrawal of the rejections of claims 1-3, 8-10, 12-25 and 27-42.

Patentable Distinctions over Sugimoto WO

New claims 44-48 presented herein include important distinguishing features over Sugimoto WO. Applicant submits that the new claims are all supported in the specification as originally filed. These claims and the accompanying remarks are presented in case, even though Sugimoto WO is not prior art to the present application under 35 U.S.C. 102(a), 102(b) or 102(e), its subject matter has become prior art through some other means unknown to Applicant.

Applicant's claim 44 requires:

a substantially hemispherical lens element having a uniform distribution of wavelength conversion material dispersed throughout, said lens element disposed proximate to said light source such that most of the light emitted from said source over the entire range of angles interacts with substantially equal amounts of said

wavelength conversion material before it is
emitted into the ambient;

Thus, the lens element includes wavelength conversion materials, such as phosphor particles for example, distributed uniformly throughout the entire lens element structure. Sugimoto WO teaches an LED assembly that includes an optical member 4 and a fluorescent member 3. Thus, two discrete parts must be formed and assembled. In contrast, Applicant's claim requires a single lens element that has the wavelength conversion material integrated within it. The lens element acts both to shape the beam and to convert the wavelength of a portion of the transmitting light.

Because only a single piece is required to perform both functions, the cost to manufacture and assemble the emitter is significantly reduced. Integrating the wavelength conversion material uniformly with the lens element, also allows for greater flexibility and customizability when manufacturing the lens element. The lens element can easily be manufactured separately to specifications, tested for uniform color and intensity transmission, and then mounted to the light source during packaging. Thus, both the lens element and the light source can be tested separately before combining them in the final package, streamlining the testing process by identifying defective components prior to incorporating them into the final emitter device. These and other advantages emphasize the importance of the structural and functional differences between independent claim 44 and the teachings of Sugimoto WO. For at least the reasons stated above, independent claim 44 and dependent claims 45-48 are allowable.

Claim Rejections - 35 USC § 103

The Examiner has rejected claims 1, 6 and 7 under 35 U.S.C. 103(a) as being unpatentable over Carey et al. (US 6,204,523) (hereafter "Carey") in combination with the knowledge of one of ordinary skill in the art. Although Applicant respectfully disagrees with the Examiner's analysis of the prior art, claim 1 has been amended to more fully describe the subject matter therein.

Applicant's claim 1 discloses an emitter that emits "a combination of [] first and second spectrums at a substantially uniform color and intensity." The first spectrum is the light emitted from the light source. The conversion particles absorb a portion of the first spectrum and re-emit light comprising the second spectrum. As claim 1 requires, the two spectrums combine within the conversion material region, and the emitter emits a combination of the two. The emitted combination has a substantially uniform color and intensity.

Carey, taken alone or in combination with knowledge of one of ordinary skill in the art, does not teach, suggest or disclose all of the limitations of Applicant's claim 1. Specifically, Carey does not teach emitting a combination of two spectrums with a substantially uniform color and intensity. Carey is silent as to the uniformity of the emitted spectrum. In fact, all of the figures illustrating the embodiments discussed in Carey show a structure that would likely yield a non-uniform emission profile. Referring to Fig.2 and Fig.3 of Carey, the light emitted from the LED die 26 would travel through different lengths of the surrounding materials 20, 22, 28. If the surrounding materials 20, 22, 28 contain conversion material,

the emitted light will exhibit a non-uniform color and intensity depending on the angle of emission from the LED 26. Referring to Fig.4 of Carey, any light emitted from the back side of LED die 36 will travel through more of the surrounding material 32, and the emitted light will also be non-uniform with respect to color and intensity. Spectral uniformity is, on the other hand, an important requirement of the structure disclosed in Applicant's claim 1. For at least the reasons stated above, claim 1 is not rendered obvious by the cited references.

Claims 6 and 7 depend from allowable claim 1 and as such are also allowable for at least the same reasons.

The Examiner rejected claims 11, 22, 26 and 43 under 35 U.S.C. 103(a) as being unpatentable over Sugimoto WO. As discussed above Sugimoto WO is not prior art in the present application. Furthermore, claim 11 depends from allowable claim 1; claims 22 and 26 depend from allowable claim 18; and claim 43 depends from allowable claim 32. Claims 11, 22, 26 and 43 are allowable.

The Examiner has rejected claim 5 under 35 U.S.C. 103(a) as being unpatentable over Sugimoto WO in view of Duggal et al. (US 6,891,330) (hereafter "Duggal"). As discussed above Sugimoto WO is not prior art, and Duggal, alone, does not teach all of the limitations of claim 5. Furthermore, claim 5 depends from allowable claim 1. Claim 5 is allowable.

Examiner's Response to Arguments

In the "Response to the Final Office Action and Request for Continued Examination" mailed on December 15, 2006, the Applicant asserted that Sugimoto WO was not prior art under 35 U.S.C. 102(a) as discussed in a previous communication. The

Examiner correctly points out that no such discussion exists. The Applicant submits that a typographical error led to the confusion. The discussion to which Applicant was referring dealt with the inapplicability of Sugimoto WO under 35 U.S.C. 102(e), not 102(a). However, at this point Sugimoto WO has been shown to be inapplicable under 35 U.S.C. 102(a), 102(b) and 102(e).

CONCLUSION

Applicant submits that claims 1-3 and 5-48 are in condition for allowance and respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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